

ENTOMOLOGY.—*New Neotropical genera and species of apterous aradids (Hemiptera)*. CARL J. DRAKE, Iowa State College.

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The present paper contains the descriptions of one new genus, one subgenus, and five species of apterous aradids from the Americas. The types have been deposited as stated in the descriptions. In the structural measurements, 80 units equal 1 mm.

Emydocoris montanus, n. sp.

Very broad, rather thick, obovate, narrowest across front margin of pronotum, above with a complicated pattern of high elevations and deep cavities, without lateral lobes or projections, dark ferruginous without color markings, without vestiture. Head broad, subquadrate, width across eyes and median length subequal (2.25 mm). The lateral edges nearly parallel; lateral shelves very wide, long, depressed, with bases almost in contact with front margin of pronotum; eyes moderately large, subovate, about two-thirds as broad as long, each placed at middle of lateral side of lateral shelf, slightly inserted, about three-fifths of its width extending outward beyond the lateral side, the shelf behind the eyes broad; antenniferous tubercles stout, tapering anteriorly, slightly divergent; median longitudinal part of head elevated above lateral shelves, about one-third as wide as interocular space, strongly rugose above, projecting about one-third of its length beyond base of antennae; tylus moderately wide with superior surface smooth and longitudinally convex; juga surpassing tylus, dilated apically, meeting at midline in front of tylus. Labial sulcus deep, narrow, extending to collar; labium short, brownish, nearly attaining end of sulcus. Neck very short, constricted, rounded. Antennae and head subequal in length; antennal segment I quite stout, bent outward opposite apex of antenniferous tubercle; II shortest, slenderest; III slowly enlarged apically; IV subelavate; measurements—I, 45; II, 30; III, 54; IV, 50.

Pronotum a little narrower than mesonotum, narrower in front than behind, sloping obliquely downward anteriorly, approximately $2\frac{1}{2}$ times as wide at base as median length (210:80), with outer sides of dorsal surface very strongly widely and rugosely elevated, strongly depressed between

lateral elevations, with the large median plate divided at middle by a deep longitudinal furrow, separated behind from mesonotum by a transverse suture, the collar short, depressed, strongly constricted, with a small knob on each side. Mesonotum separated from metanotum by a strongly sinuate suture, narrower than pronotum, longest at middle, four times as wide at base as median length (longest at middle), with a very wide, convex and smooth median ridge, with lateral elevation not quite as large as on pronotum, with a deep transverse cavity on each side between median ridge and large lateral elevation. Metanotum not attaining outer margin of body, fused with abdominal tergites I–VI (inclusive) into a solid plate, the plate wider at base than behind, width at base (metanotum) and median length subequal, with transverse suture between tergites II and III faintly indicated, with median ridge widened and elevated posteriorly, abruptly widened on tergites II and III, thence posteriorly gently sloping downward, with glandular elevation at centre of widened hind part plainly visible, with dorsal surface of median ridges and elevations smooth and without complex sculpturing, narrowly depressed on each side of the highly elevated area between the longitudinal suture separating tergites from connexival segments, with a deep cavity on each side of median ridge just back of metanotum, with three knoblike structures in cavity just behind metanotum and five transverse ridges in narrowly depressed strip adjacent to each connexivum.

Connexiva slowly narrowed anteriorly, with segments I and II fused, other segments separated from one another by transverse sutures. Spiracles II to VII (inclusive) ventral, remotely removed from outer edge of their respective segments, spiracle VIII (genital segment) placed on apical end of a short, posteriorly-directed tubercle. Body beneath moderately convex; prosternum with a median longitudinal carina, separated from mesosternum by a transverse suture; mesosternum also with a visible suture behind it (probably not functional); metasternum fused with abdominal ventrites I–III (inclusive), other ventrites separated from one another by

deep suture. Legs short, dark brownish ferruginous with pale tarsi, the femora of all legs slightly flattened beneath and beset with two longitudinal rows (one row near anterior edge and other near posterior) of short, stout, tubercle-like teeth or pegs with rounded tops. Ostiolar canal tubular, extending obliquely upward posteriorly, with an ovate opening slightly above middle of pleura, not visible from dorsal aspect. Scutellum entirely absent, without trace of wings or wing pads.

Length, 8.75–9.20 mm; width, 4.75 mm.

Holotype (male) and *allotype* (female), Brasil, November 29, 1890, collected by Dr. Warburg, in collection of Zoologisches Museum, Zoologisches Staatsinstitut, Hamburg, Germany. *Paratype*: 1 specimen, same locality as type.

Separated from *Emydocoris testidinatus* Usinger (1941) by its larger size, antennal segments, short legs with all femora armed beneath, high elevations and deep cavities of dorsal surface (especially abdomen) and the large tubular ostiolar canal projecting obliquely upward with an ovate opening on outer side.

Receecicus, n. gen.

Broadly ovate, unusually thick, beneath transversely convex, dorsally strongly longitudinally convex, rugged, humpbacked, adorned on median part of thorax and basal half of abdomen with large craggy protuberances and depressions, with thorax sloping downward anteriorly and abdomen downward posteriorly. Head very wide, subquadrate, not narrowed behind eyes; lateral shelves very wide, thin, with dorsal surfaces on much lower level than that of median longitudinal part of head, tilted upward laterally, with eyes rather small, longer than wide and placed near middle of outer edge of each shelf; tylus fairly wide, rugged; juga narrower, not exceeding tylus in front; neck short. Labial sulcus deep, rather narrow, not extending to neck; labium short, not attaining apex of sulcus. Antennae short, subequal to head in length; segment I short, moderately swollen, bent, not surpassing apices of tylus and juga; other segments also short, with IV a little swollen. Legs rather short, slender.

Pronotum much wider than head, about four times as wide as long, rugged, not excavated in front for reception of collar; collar short, constricted; mesonotum short, rugged, with transverse furrow separating it from pronotum and

also from mesonotum (sutures seem to be fused); metanotum partly concealed by raised and overlapping base of abdomen. Thoracic divisions and abdominal tergites I to VI (inclusive) apparently conjointly fused but with a narrow, deep furrow between II and III. Abdomen distinctly broadly cordate, with apex narrow and rounded, with wide basal part a little raised and fused upon base of metanotum, thus together with craggy elevations giving body a distinctly hunchbacked appearance; connexival segments strongly curving inward at base, apparently with segment I represented (seven segments).

Spiracle II ventral, remotely removed from outer margin; III to VII (inclusive) lateral, plainly visible from above; VIII (genital segment) posterolateral, placed at apical end of rounded projection, visible from dorsal aspect.

Type species, *Receecicus saileri*, n. gen. and n. sp.

This very curious genus differs greatly in a few respects from all other genera of apterous aradids. The body is very thick, broadly ovate, strongly longitudinally convex and distinctly hunchbacked in appearance; lateral sides deeply furrowed for the reception of legs; abdomen above broadly heart-shaped, narrowly rounded behind, with base wide, slightly elevated; connexival segments at base strongly curved inward and fused upon the basal part of metanotum. Connexival segment I appears to be represented as seven segments are visible. Spiracle II is ventral and remotely removed from lateral margin; III to VII (inclusive) placed on low half of the longitudinally divided (by narrow furrow) outer edge of connexiva. The head is rather similar in shape and appearance to *Emydocoris* Usinger (1944), but the smaller eyes, shape of body, location of spiracles and other striking differences separate at once the two genera. This genus and species are named in honor of Dr. Reece I. Sailer, who is in charge of the Hemiptera, U. S. National Museum.

Receecicus saileri, n. sp.

Fig. 1

Moderately large, very thick, extremely longitudinally convex above, strongly rugged, with a distinctly humped back. Head subquadrate, with sides widening posteriorly, slightly angulately produced at latero-posterior corner, wider at base (100) than either across eyes (70) or between tips of antenniferous tubercles, each lateral shelf occupying one-

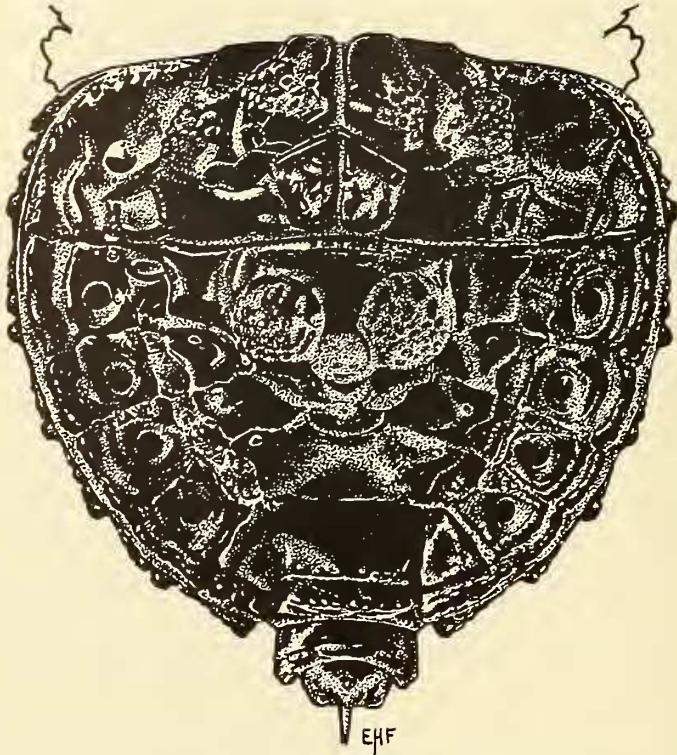


FIG. 1.—*Reeceicus saileri*, n. gen. and sp. Dorsal aspect of abdomen ($\times 32$).

third of space between eyes; juga not surpassing tylus. Antennae short, measurements—I, 20; II, 16; III, 18; IV, 20. Labium short, brownish. Sides of thorax with an oblique, upright channel for reception of anterior femora; with an inverted V-shaped channel for reception of middle femora and tibiae, and the thorax and base of abdomen also with an inverted V-shaped channel for reception of hind femora and tibiae.

Pronotum almost twice as wide as base of head (185:100), nearly four times as wide at base as median length (200:50), not excavated in front for insertion of collar, with a subquadrate protuberance at middle; mesonotum not longer than pronotum, with the protuberance of meso-metanotum higher and more deeply furrowed at middle than similar structure on pronotum. Abdomen broadly heart-shaped, widest near base, roundly narrowed posteriorly, rounded and narrowest behind, subtruncate at middle of front margin, tilted upward anteriorly, with base fused up on posterior part of metanotum, with connexiva curving inward and extending along anterior part of base of abdomen, with basal

platelike protuberance large, trapezoidal (basal and apical margins parallel and long; sides obliquely widened apically), divided into four equal parts by three longitudinal furrows (median furrow and one on each side of it); tumid area behind furrow between tergites II and III quite large. Connexiva composed of seven segments (I present), curving strongly inward at base so as to occupy two-sevenths of basal margin on each side, thus leaving only three-sevenths of base at middle). Exterior margin of abdomen rather thick, with edge divided by a narrow longitudinal furrow, with stigmata III to VII (inclusive) placed on lower half of lateral edge, all spiracles (save II) visible from dorsal view.

Length, 4.50 mm; width, 2.90 mm.

Holotype (female), Yurimaguas, Peru, Drake Collection.

***Glyptocoris verus*, n. sp.**

Large, broadly ovate, widest across middle of abdomen, narrowest across front margin of pronotum and there very little wider than head

across eyes, reddish ferrugineous with abdomen darker and a small marginal spot on each side at base of all thoracic divisions and of all connexival segments pale or whitish flavous. Head quadrate, as wide across eyes as median length (86:88), strongly rugose above; lateral shelves thick, with dorsal surface on a slightly lower level than that of median longitudinal part of head, extending posteriorly behind eyes nearly the length of an eye before narrowing to neck, with an angulate lateral projection or tubercle behind each eye at postero-lateral end; median longitudinal part of head a little narrower than a lateral shelf, with a small tubercle on each side just in front of neck; tylus moderately stout, rugose, sloping downward at apex; juga surpassing tylus about as far as the distance between their apices. Labial sulcus short, wide, fairly deep, with edges and lateral sides closely coarsely granulate; labium barely attaining end of sulcus. Antennae longer than head, granulate; segment I stout, a little bent outward; IV subclavate, with short pale hairs on tip; measurements—I, 52, II, 32; III, 42; IV, 34. Legs slender, finely granulate.

Pronotum strongly narrowed anteriorly, much wider behind than in front, closely granulate on lateral sides, deeply rectangularly excavated on margin for reception of collar, with margin on each side projected anteriorly as far as anterior face of collar, deeply widely furrowed on median longitudinal line behind the middle, with a transverse furrow separating pronotum and mesonotum, twice as wide in front as median length, three times as wide at base as median length (160:50); mesonotum wider and shorter than pronotum, with a shallow furrow separating it from metanotum; metanotum longer than pronotum, with its hind margin elevated although fused with first two abdominal tergites; pro-, meso- and metanotum and abdominal tergites I and II conjointly fused, with a wide, median, longitudinal ridge extending uninterruptedly from base of pronotum to end of tergite II, with short lateral ridges on each side of median line of large median ridge. Abdomen above with tergites III to VI (inclusive) conjointly fused, sculptured on each side of low, wide, pale, median, longitudinal ridge; connexival segments I to III fused together, the others distinctly sutured from one another. Body beneath with sternal segments and first three abdominal ventrites conjoined together, other abdominal ventrites separated by sutures.

Spiracles V, VI and VII lateral; VIII (genital) placed on end of posteriorly directed tubercle; and II, III and IV ventral, the latter subventral, III considerably removed from outer edge and II remotely removed, all three not visible from dorsal aspect. Male unknown.

Length, 6.20 mm; width, 3.10 mm.

Holotype (female) and 1 *paratype* (female), Guadeloupe Island, West Indies. Drake Collection.

Although somewhat atypical, this species fits better in the genus *Glyptocoris* than other genera of American apterous aradids. The thoracic divisions are distinguishable from one another, though fused together and also conjoined with first two abdominal tergites.

Aglaocoris comes, n. sp.

Small, rectangular in outline, reddish fuscous or reddish ferrugineous, without lateral lobes, coarsely granulate on lateral margins of thorax and abdomen. Head subtriangular, rapidly narrowed behind eyes, with a short neck, width across eyes and median longitudinal length subequal; eyes small, reddish, placed up on the outer end of a very short, slightly tilted-up pedicel; juga surpassing tylus, with tips blunt and feebly divergent, with dorsal surface on a much lower level than that of tylus; tylus rugose, fairly thick; lateral shelves and median part of head rather strongly rugulose, with dorsal surfaces on almost same horizontal level, the shelves thick and each about as wide as median part of head, with a small protuberance back of each eye; antenniferous tubercles stout, divergent, each terminating in a small fingerlike projection. Labial sulcus moderately wide, not extending to neck; labium not as long as sulcus. Antennae granulate, longer than head, with first segment slightly bent outward, measurements—I, 36; II, 30; III, 24; IV, 24. Legs moderately long, granulate.

Body nearly as wide in front as behind (72:75), slightly wider at middle (90), with median length nearly one and one-half times as long as median width (130:90). Pronotum more than four times as wide at base as median length, scarcely excavated in front for reception of collar, sulcate on median longitudinal line; collar smooth, short and with an encircling median ridge, marked off from mesonotum by a transverse furrow, fused with mesonotum. Pro-, meso-, and metanotum and abdominal tergites I and II conjointly fused, with a large median longitudinal ridge extending

from base of pronotum almost to posterior margin of tergite II, the ridge strongly rugose, wider and higher on basal half. Abdomen with tergites III to VI (inclusive) fused together, with a tumid glandular elevation near the middle of the low, median, longitudinal ridge, with an intricate pattern of sculpturing on each side of median ridge; VII distinctly defined; connexival segments I, II and III grown together, without separating sutures, other segments sutured from one another and from abdominal tergites. Abdomen beneath with sternal division and ventrites I-III (inclusive) conjointly fused, other segments sutured from one another. Spiracles II to IV (inclusive), ventral, submarginal, each progressively anteriorly slightly farther removed from outer edge; V sublateral (ventral) and VI and VII lateral and VIII postero-lateral on end of a short rounded process, all four of which are visible from dorsal aspect. Abdominal ventrite VII beneath (one on each side) with a large ovately rounded, smooth, constricted at neck (distinctly bottle-shaped), ventrally-directed protuberance (male structure; not found in female).

Holotype (male) and 1 *paratype* (male), Three Rivers, Guadeloupe, West Indies, in Drake Collection.

Separated from *A. natalii* Drake and Maldonado by its smaller size, shorter eye-stalks, median longitudinal ridge on pronotum and the much larger and very differently shaped (flask-like) protuberance projected downward on the underside of ventrite VII (one on each side) in the male.

***Asterocoris* (*Peggoris*) *zeteki*, n. subg. and n. sp.**

Small, oblong (male) or obovate (female), dark reddish fuscous or ferruginous. Head subtriangular, width across eyes and median longitudinal length subequal, sharply narrowed behind eyes, with the small elevation back of each eye beset with setalike, whitish hairs; tylus moderately stout, feebly narrowed anteriorly, with dorsal surface on a higher level than that of juga; juga scarcely exceeding tylus, each jugum with one or two, long, stiff, setalike hairs projecting anteriorly from its apex (sometimes hairs are rubbed off); median longitudinal part of head narrower than each lateral shelf, smooth, with a moderately large rounded elevation on median line between bases of lateral shelves; neck short, with a small tubercle on each side; eyes small, reddish, pedicellate, with short stalk slightly

tilted upward; antenniferous tubercles short, stout, rounded apically. Labial sulcus very wide, short, shallow, not reaching to neck; labium brownish, not reaching to end of sulcus. Antennae long, reaching beyond pronotum; segment I very long, extending three-fourths of its length beyond apices of juga, rather densely clothed with stiff, setalike, whitish hairs which are as long as width of segment at their respective points or origin; other segments with shorter hairs; measurements—I, 74; II, 26; III, 34; IV, 30.

Pro-, meso-, and metanotum and abdominal tergites I and II fused together; median longitudinal ridge large and smooth, without transverse sutures, tapering a little anteriorly, extending from base of tergite II anteriorly to collar, with the thoracic divisions on each side of median ridge indicated by transverse furrows. Abdominal tergites III to VI (inclusive) conjointly fused, with a large, median longitudinal ridge, the sculptured areas on each side of ridge rather shallow; connexival segments (except I and II fused) separated from one another and from abdominal tergites by sutures. Body beneath with the three sternal divisions and first three abdominal segments conjointly fused, the other ventrites separated from one another by sutures. Ostiolar channel not extending upward to dorsal surface, thus not visible from above. Lateral margins of body with several small tufts of short, setalike, whitish hairs. Legs fairly long, slender, sparsely clothed with short, coarse, whitish hairs.

Spiracles placed up on top of small elevations, the elevations slightly higher in male than in female; spiracles II, III and IV ventral, not visible from dorsal aspect; V sublateral (ventral) and VI, VII and VIII (genital segment) lateral and all visible from above.

Length, 3.90–4.40 mm; width, 1.74–2.10 mm.

Holotype (male) and *allotype* (female), Barro Colorado, Canal Zone, Panama, 1948, take by means of Berlese funnel from forest litter, by James Zetek, in U. S. National Museum. *Paratypes*: 5 specimens, same labels as type. Named in honor of Mr. Zetek, who has collected so many rare and interesting insects in Panama.

The new subgenus *Peggoris* differs from *Asterocoris*, s. str., by the lack of long lateral lobes on body, position of spiracles, short juga, fusion of thoracic divisions and location of ostiolar channel.

Aglaocoris cubanus, n. sp.

Small, oblong (male) or obovate (female), without lateral lobes, depressed above, finely shallowly sculptured. Head subtriangular, width across eyes and median length subequal (82:85); tylus moderately wide, rugose, with dorsal surface on a higher level than that of juga; juga thin, feebly surpassing tylus; lateral shelves nearly as wide as and with dorsal surface on same level as that of median longitudinal part of head; eyes small, pedicellate, with short stalk nearly horizontal; antenniferous tubercles moderately large, tapering anteriorly, with apices blunt; neck short, constricted, with a small tubercle on each side of outer edge of dorsal surface. Labial sulcus short, very wide, moderately deep, not extending to neck; labium scarcely attaining apex of sulcus. Antennae granulate, longer than head, with segment I extending three-fourths of its length beyond apices of juga, measurements—I, 40; II, 26; III, 30; IV, 24.

Pronotum strongly narrowed anteriorly, wider in front than width across eyes, deeply widely triangularly excavated in front for reception of large collar, with front margin beyond collar extending anteriorly as far as anterior margin of collar, with a small tubercle (one on each side) on antero-inner margin of front projection extending inward to collar; collar large, smooth, with a

deep, median, encircling sulcus; mesonotum wider than and practically same length as pronotum, separated by furrows from both pro- and metanotum. Three thoracic divisions and abdominal tergites I and II bused together, with a very low, wide, median ridge extending from basal part of pronotum to apex of tergite II, with dorsal surface pretty much covered with many small, longitudinal ridges. Abdomen with tergites III to VI (inclusive) fused, shallowly sculptured, with a small discal elevation on low median ridge; connexival segments (save I and II fused) sutured from one another and also from tergites. Spiracles II, III and IV ventral, not visible from above; V subventral, scarcely visible from above; VI, VII and VIII (genital segment) all lateral and plainly visible from dorsal aspect. VII ventrite (male) with a small, rounded, bottle-shaped projection (one on each side; directed downward), with constricted neck.

Length, 4.75 mm (male) and 5.50 mm (female); width 2.20 mm (male) and 2.75 mm (female).

Holotype (male) and *allotype* (female), Cayamas, Cuba, in Drake Collection.

Distinguished from its congeners by shape of body, deeply broadly excised anterior margin of pronotum for reception of collar and by shape of male protuberances on underside of abdominal ventrite VII.

"PINE CONE" FISHES

There are fishes in the sea that when alive look like swimming pine cones. When dead and dried they actually could be mistaken at first sight for pine cones. They belong to quite a distinctive genus, *Monocentris*, which has an isolated niche in ocean life. They do not seem related to anything else.

A unique specimen taken off the Robinson Crusoe island, Juan Fernández, off the coast of Chile, by Dr. Edwyn P. Reed, chief of the biological service of the Chilean Fish and Game Department, has just been identified at the U. S. National Museum, Smithsonian Institution, by

Dr. Leonard P. Schultz, curator of fishes, who has described it as a hitherto unknown species, the first of the entire family known in the American Pacific.

The "pine cones" are small fishes, the largest slightly more than 3 inches long. They are rare anywhere. The habitat with which they were associated was the tropical western and central Pacific until they were found at considerable depths in the eastern Pacific. One genus "carries lanterns," that is, luminous organs, on each side of the mouth, as do many other oceanic fishes.